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Instruction Sheet For JIMS® Right Side Drive 6-Speed Overdrive

JIMS® R.S.D. 6-Speed Overdrive complete Transmission Kit numbers 8248, 8249, 8250, 8251, 8252, 8253, 8259, 8260, 8266 and 8267.

We have included this instruction sheet for reference to disassemble the transmission. Disassembly is the same as assembly, but in reverse order.

READ ALL INSTRUCTIONS BEFORE PERFORMING WORK!

Prior to installation of this kit, please read and follow the procedures and safety precautions to reduce the risk of personal injury.

IF YOU DO NOT KNOW WHAT YOU ARE DOING, DO NOT DO IT!

No information in this instruction sheet pertaining to motorcycle repair is represented as fool proof or even altogether safe. Some people can ruin a mechanic's vise with a tack hammer. Even something safe, done incorrectly or incompletely can and will backfire. You are responsible for the safety of your work and knowledge of the tools, repair equipment, components, methods and concepts needed to complete these tasks. You must carefully and systematically perform each and every step safely. All information listed in this instruction sheet has been tested, re-tested and used daily in JIMS® Research and Development Department.

JIMS® IS NOT RESPONSIBLE FOR THE QUALITY AND SAFETY OF YOUR WORK!

If you are not sure about any of the procedures in these instructions, have a reputable H.D. repair shop perform these procedures for you.

WARNING: Always disconnect the Battery Ground Cable (at the battery) to prevent injury. Your work area should be well lit. Wear safety glasses (over your eyes) and protective clothing when working around power tools and compressed air. Be careful with chemicals when cleaning parts. Protect your skin from solvents and use only in a well-ventilated area. Degreasers are flammable and are a fire hazard. Just use common sense and exercise good judgment. Securely mount the trans case (if not installed in Motorcycle) with JIMS Tool No.1145 Complete Modular Engine & Transmission Stand Kit or JIMS Tool No. 1289 Trans Stand. This kit is basically easy to install, but does require some special tools. (See tool list)

NOTE: Any time you see ** It is an indication to lube using JIMS No.1231 Transmission Oil for a lubricant. (Example: Apply a small amount of Trans Lube ** to Parts being installed in this kit.)

Special Tools Required to install JIMS R.S.D. 6 Speed Super Kit:

The only special tools required are tools that may also be required for any 5-speed installation.

JIMS® Part No....Description:

35316-80.....5-speed Main Drive Gear Tool
34902-84.....Mainshaft Bearing Race Tool
94660-37A ...Mainshaft Sprocket Locknut Wrench
2260 .....Big Twin Sprocket Locker
1131 .....Small Lock Ring Pliers
1133 .....Large Lock Ring Pliers
1720 .....5-speed Main Bearing Remover
1102 .....Solvent 184
1080 .....Brass Hammer

Continued Next Page

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Special Tools Required (Continued)

JIMS® Part No....Description:

1289 .....Trans Stand
1145 .....Modular Engine & Trans. Stand Kit
2256 .....Main Drive Gear Seal Protector
1664 .....Shift Lever Pivot Sleeve R & I

Special Parts Needed To install JIMS® 6-Speed Super Kit:

JIMS® Part No....Description:

1231 .....Good Quality Gear Oil
8042K.....Speedo Block-Off Plate
(Depending on application)
42533-91A ...Vent Hose
Good Quality DOT 5 Brake Fluid
8126 .....Speedo-Recalibration Module
(Depending on pulley and tire size)

NOTE: Spacer No. 8424 is for Belt Pulley applications, if you will be using a Sprocket you need to shorten or lengthen this spacer for proper Chain alignment to Rear Sprocket.

NOTE: To use Hydraulic Pulley Cover, JIMS No. 8422 you will need a Hydraulic Clutch Master Cylinder similar to H.D. No. 45232-03A, a Clutch Line (Braided Stainless Brake Line) that is about 70 inches long (depending on Handle Bars, Risers and Frame) similar to H.D. No. 38669-03, except with a Banjo fitting at each end, two Banjo Bolts like H.D. No 41747-82A and Sealing Washer (gasket) like H.D. No 41731-01.

NOTE: Refer to your Service Manual and parts book for the proper year and model you will be installing this kit in for reference. Also, Use a Late H.D. 2002- Pres Big Twin Service Manual and parts book for reference.

INSTRUCTIONS FOR PREPARING THE TRANSMISSION CASE TO INSTALL JIMS R.S.D. 6 SPEED SUPER KIT: (COMPLETES HAVE BEEN PREPARED)

1. Remove Old Gear set and all Case Bearings. Refer to your H.D. Service Manual.

NOTE: If Dowel Pin H.D. No. 634 came out upon the Gear Set removal, it will need to be reinstalled back into the Trans Case. Refer to your H.D. Service Manual.

2. Upgrade Shifter Shaft Bushing for 1990-99 Big Twins and 1999-2000 T/C FLHT, FXR & FXD by removing the existing Shifter Shaft Bushing and installing a new longer shifter Shaft Bushing (Sleeve) JIMS No. 7514 (supplied in this kit). Follow the Instruction Sheet provided with JIMS Tool No. 1664 and refer to your Late H.D. Service Manual for Shifter Shaft Assembly.
3. Wash and rinse out the entire inside of your trans case.
4. Install Main Drive Gear Bearing JIMS No. 8996 (supplied in this kit) using JIMS Tool No. 35316-80. Follow the Instruction Sheet provided with Tool or Refer to your H.D. Service Manual.
5. Install Retaining Ring JIMS No. 11161 (supplied in this kit). Refer to your H.D. Service Manual.

NOTE: <u>NEVER</u> install any bearings into the Case by applying pressure to the inner race. Doing so will destroy the bearing.

6. Install new Main Seal JIMS No. 12067 (supplied in this kit) with JIMS Tool No. 95660-85 used with JIMS Tool No. 95660-42. Refer to you H.D. Service Manual.
7. Install Countershaft End Bearing JIMS No. 8977. Refer to your H.D. Service Manual.

NOTE: Install Countershaft Bearing by applying pressure to the LETTER side of bearing ONLY.

8. Install Shifter Shaft Seal JIMS No. 12045 (supplied in this kit). Refer to your H.D. Service Manual.
9. Install Shifter Assembly JIMS No. 8325 (supplied in this kit). Refer to your Late H.D. Service Manual.

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10. Install Shifter Shaft Washer JIMS No. 6497HW and Retaining Ring JIMS No. 11150 (supplied in this kit). Refer to your Late H.D. Service Manual.
11. Install Shifter Shaft Centering Pin (Bolt) JIMS No. 34978-00A (supplied in this kit). Torque Bolt to 10 ft-lbs. Refer to your Late H.D. Service Manual.

⚠ **Caution: Center shifter assembly return spring on each side of centering bolt.**

INSTRUCTIONS FOR PREPARING THE TRANSMISSION TOP COVER TO CLEAR THE NEW SHIFTING LEVER WHEN INSTALLING JIMS R.S.D. 6 SPEED SUPER KIT INTO ANY 1990-99 BIG TWINS AND 1999-2000 T/C FLHT, FXR & FXD MODELS:

NOTE: The Top Cover for Completes have been Prepared.

NOTE: 2000-Present FXST and 2001-Present FLHT & FXD models do not need modifying.

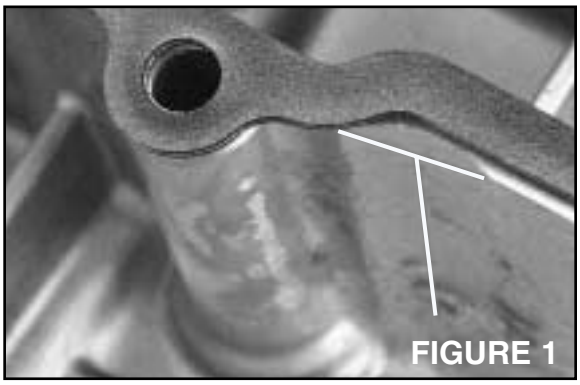
FIGURE 1

1. Place new Top Cover Gasket JIMS No.34904-86 on the Trans Top Cover flange.
2. Use 4 of your Top Cover screws to hold Gasket in place by slipping screws thru the Gasket and into the Top Cover.
3. Mark the inside exposed portion of the flange as shown in ***Figure 1***. The Material to be removed is .060 wide by 1.80 Deep. Remove Top Cover screws and Gasket.
4. With a die grinder tool, remove the casting rib until it is the same height as the adjacent surface area. Clean Top Cover of all loose material, including screw holes as shown in ***Figure 1***.
5. With shifter assembly installed in transmission; Install Top Cover with gasket using only 2 screws loosely (so cover can move if Shifter Arm is making contact with Top Cover).
6. While watching to see if the Top Cover moves forward, shift the transmission into first gear firmly holding the shift lever down. If there is no forward movement of the Top Cover, then the modification is complete. If any forward movement (of Top Cover) is observed, then more of the casting rib must be removed. Repeat Step 4 as necessary.

INSTRUCTIONS FOR INSTALLING JIMS R.S.D. 6 SPEED SUPER KIT PARTS INTO CASE: (COMPLETES HAVE BEEN PREPARED)

Note: Remove Pulley Cover from Trap Door (set aside for final installation)

⚠ **Caution: O-Rings have been installed prior to shipping.**

1. Place Trap Door Gasket JIMS No. 8352, (supplied in this kit) over the two Dowel Pins on Case. Refer to your H.D. Service Manual.

Note: Do not remove the Mainshaft Protective Cover on the Clutch Hub spline end of Mainshaft. It can be removed after Super Kit has been installed into the Trans Case.

2. Gently place the Gear Set (Trap Door Assembly) into the Trans Case by sliding the Mainshaft through the Main Drive Gear Case Bearing while slowly pushing the Trap Door Assembly inward until the Trap Door makes contact with the two Dowel Pins in the Trans Case. Refer to your H.D. Service Manual.

   A non-marring hammer is helpful to tap the Trap Door Assembly over the Dowel Pins without risking damage to the Aluminum / Chrome of the Trap Door Assembly.

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3. Apply a small amount of lube ** or Blue Loctite to the one 5/16" screw JIMS No. 1118, three 5/16" screws JIMS No. 8092, one 1/4" screw JIMS No. 1258 and three 1/4" screws No. 1261 (all screws supplied).
4. Thread the shorter 5/16" screw, JIMS No. 1118 into the lower front hole of the trap door.
5. Thread the three 5/16" screws, JIMS No. 8092 into the remaining lower three holes in the trap door.
6. Thread the shorter 1/4" screw, JIMS No. 1258 into the upper front hole in the trap door.
7. Thread the three 1/4" screws, JIMS No. 1261 into the remaining upper three holes in the trap door.
8. Torque all four 5/16" screws to 13-16 ft-lbs in a criss-cross pattern. Refer to ***Figure 2***.
9. Torque all four 1/4" screws to 84-108 in-lbs in a criss-cross pattern. Refer to ***Figure 2***.

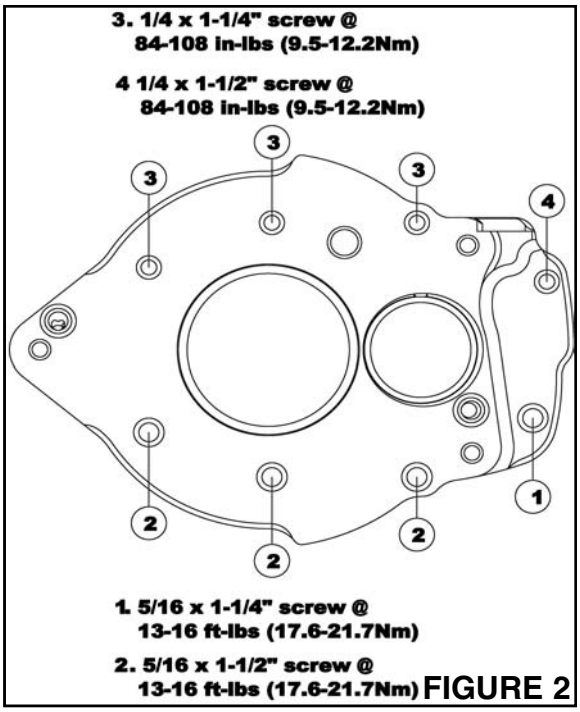
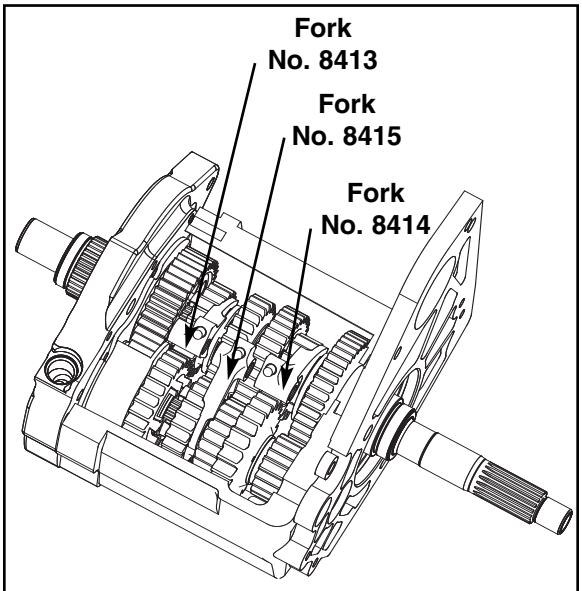


FIGURE 2

INSTRUCTIONS FOR INSTALLING JIMS R.S.D. SHIFT FORKS:

1. Place the 1st-2nd gear Shift Fork, JIMS No. 8415 into Fork Slot of the 3rd-4th combo gear, JIMS No. 8405 by putting it down through the Top Cover opening and sliding into place as shown in ***Figure 3***.
2. Place the 3rd-5th gear Shift Fork, JIMS No. 8413 into Fork Slot of the 2nd gear, JIMS No. 8403 by putting it down through the Top Cover opening and sliding it into place as shown in ***Figure 3***.
3. Place the 4th-6th gear Shift Fork, JIMS No. 8414 into the Fork Slot of the 1st gear, JIMS No. 8401 by putting it down through the Top Cover opening and sliding it into place as shown in ***Figure 3***.
4. Slide Shift Fork Shaft, JIMS No. 8446, ** (supplied in this kit) through the hole in the trap door, all three Shift Forks and into the Left side of Trans Case. Refer to you H.D. Service Manual.
5. Install Shifter Shaft Set Screw, JIMS No. 3784, (supplied in this kit) by first applying a small amount of Blue Loctite to threads and tightening until you have about .020 endplay on the Shifter Shaft.



Case shown cut away for clarity

FIGURE 3

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INSTRUCTIONS FOR INSTALLING MAIN SEAL SPACERS AND TORQUING MAINSHAFT NUTS: (FOR BOTH SUPER KITS AND COMPLETES)

1. Slide all 3 Shift Forks into any gear locking the trans and keeping the gears from turning for final torquing of the mainshaft nuts.

Note: You may need to install the right side Final Drive Pulley first, this will allow the use of JIMS Tool No. 2260 Sprocket Locker to hold the Pulley and Mainshaft from turning instead of the gear set as you are Torquing both Mainshaft Nuts.

Final Drive Side (Right Side):

2. Install Quad Seal, JIMS No. 11165, ** (supplied in this kit) over the Main Drive Gear on the right side of the Transmission. (If not already installed by manufacturer) Refer to ***Figure 4***.
3. Install Main Drive Gear Seal Spacer JIMS No. 8424 ** (supplied in this kit) over the Main Drive Gear on the right side of the transmission with the chamfered side toward the inside. Be sure not to roll the lip of the seal over during installation. (If not already installed by manufacturer.) Refer to ***Figures 5 & 6***.
4. Install final drive pulley or sprocket that you are using for your final drive system. (Not supplied in this kit).
5. Install Mega Nut JIMS No. 1708 (supplied in this kit) over the main drive gear on right side of transmission. Refer to the instruction sheet that comes with the mega nut.

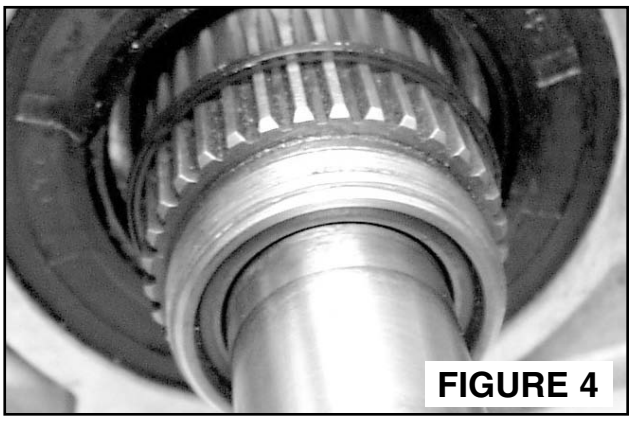

FIGURE 4

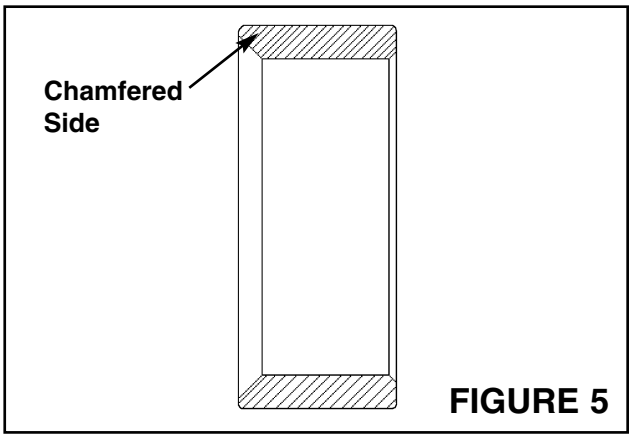

FIGURE 5

Primary Side:

2. Install Quad Seal, JIMS No. 11165, **(supplied in this kit) over Mainshaft Bearing Boss on the left side of Trans. (If not already installed by manufacturer) Refer to ***Figure 4***. **NOTE: Left side will have a Bearing Boss, not a Main Drive Gear.**
3. Install Mainshaft Seal Spacer JIMS No. 8437, ** (supplied in this kit) over Mainshaft Bearing Boss on left side of Trans, with the chamfered side to the inside. Be sure not to roll the lip of the seal over during installation. (If not already installed by manufacturer.) Refer to ***Figures 5 & 6***.

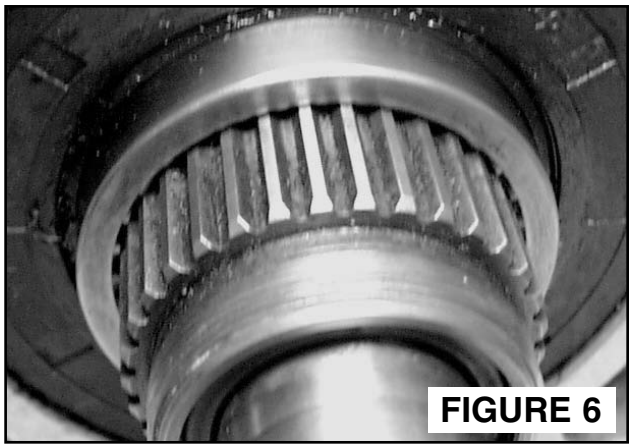

FIGURE 6

4. Install Mainshaft Nut (Seal Spacer Lock Nut) JIMS No. 35211-91B, (supplied in this kit) over the Mainshaft Bearing Boss. Apply a small amount of Red Loctite, about 3 drops, to the I.D. threads of the Lock Nut and 3 drops to the O.D. threads of the Mainshaft Bearing Boss threads. Also apply trans lube, ** to the Face of the Nut. Torque Nut to 150-160 ft lbs with JIMS Tool No. 94660-37A Mainshaft Sprocket Locknut Wrench. Refer to the instruction sheet that comes with the tool.
5. Install Primary Drive, as indicated in your Service Manual.
6. Install clutch adjusting screw, JIMS No. 8326, ** (supplied in this kit). **NOTE: For hydraulic clutch adjustment, re refer to section**

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INSTRUCTIONS FOR INSTALLING SHIFT DRUM, PILLOW BLOCKS AND TOP LID:

1. Place the Drum assembly with Pillow Blocks over the 3 Pins of Shift Forks (move forks as needed to line up with the tracks in the Shift Drum). At the same time lining the Pillow Blocks over and onto the 4 Split Dowel Pins. See your Late H.D. Service Manual.
2. Install four 1/4" Pillow Block Mounting Washers, JIMS No. 1215 over the four 1/4" Pillow Block Mounting screws, JIMS No. 2135 (both part numbers supplied int his kit). Apply a small amount of Lube ** or Blue Loctite to each screw and torque to 7-9 ft-lbs. in a criss cross pattern. See your Late H.D. Service Manual.
3. Install Top Cover Gasket, JIMS No. 34904-86 (supplied in this kit) per your H.D. Service Manual.
4. Install your Top Cover (Lid) with your mounting hardware. See your H.D. Service Manual.
5. Install Vent Hose, H.D. No. 42533-91A (not supplied in this kit) to your Top Lid Elbow Fitting. Refer to your H.D. Service Manual.

INSTRUCTIONS FOR INSTALLING PULLEY COVER (HYDRAULIC AND MECHANICAL CLUTCH):

1. Install Center Clutch Pushrod, JIMS No. 37088-90 (supplied in this kit). First grease both ends of the pushrod, then slide it into the Mainshaft until it is flush with the end of the mainshaft threads (pushrod may be installed in either direction).
2. Install sealed bearing JIMS No. 8451 onto the end of the Right Clutch Pushrod, JIMS No. 8452 (both supplied in this kit).
3. Install retaining ring, JIMS No. 8453 (supplied in this kit) into the groove onto the end of the right pushrod so that it holds the sealed bearing in place.
4. Install the Right Pushrod assembly from above steps. First grease the end without a bearing and slide the greased end into the end of the Mainshaft until the bearing is against the Mainshaft.
5. Inspect that both O-Rings, JIMS No. 11273 (supplied in this kit) have stayed in place over the Hollow Dowels in the pulley cover. Refer to ***Figure 7***.

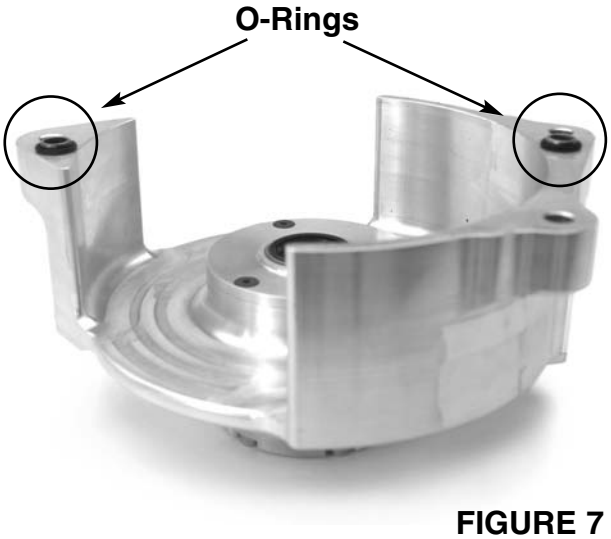

FIGURE 7

6. Install Pulley Cover over the end of Mainshaft. **Apply a small amount of Trans Lube to both the inner and outer sealing surfaces of each Seal and the sealing surface of the Mainshaft.
7. Install the three 5/16" screws, JIMS No. 1118 (supplied in this kit) **. Apply a small amount of trans Lube or Blue Loctite to each screw and the 3 screw holes. Torque each screw to 13-16 ft-lbs in a criss-cross pattern.

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INSTRUCTIONS FOR CONNECTING HYDRAULIC CLUTCH LINE:

1. Connect your Hydraulic Clutch Line, Fill the Master Cylinder with clean DOT 5 Brake Fluid and bleed the system. Refer to your H.D. Service Manual Brake Bleeding section.
2. Fill Trans with Gear Oil JIMS No. 1231, or equivalent to the same, as an H.D. 5 speed. Change Oil after the first 500 Miles. Refer to your H.D. Service Manual.
3. After installing the clutch adjusting screw, JIMS No. 8326, ** (supplied in this kit) into the clutch hub, thread the adjusting screw clockwise until all free play has been removed from both pushrods and Hydraulic Piston. (The clutch pressure plate will just start to be pushed away from the clutch pack.)
4. Turn adjusting screw counterclockwise one full turn and tighten lock nut. Bleed the system as performed in Brake Bleeding section of your H. D. Service Manual.

- OR -

INSTRUCTIONS FOR CONNECTING MECHANICAL CLUTCH CABLE:

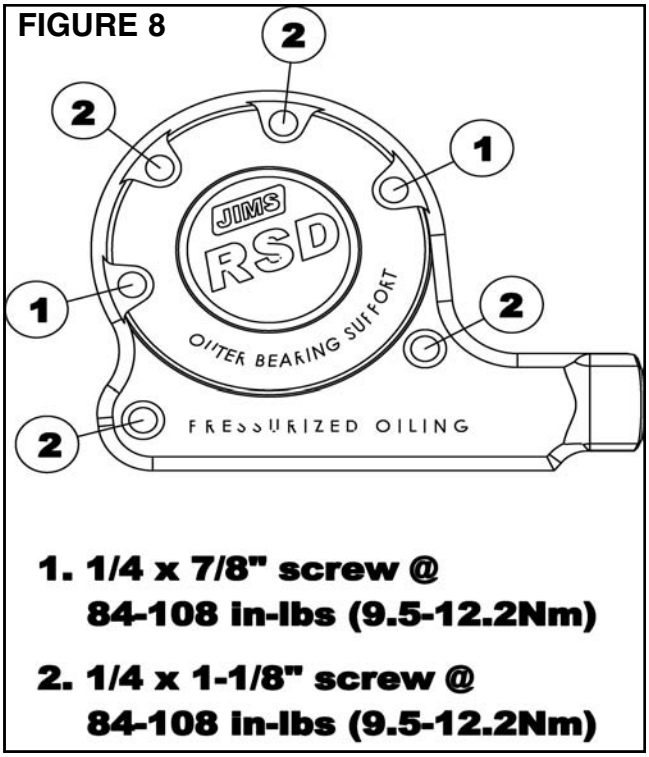
You need to remove the Actuator Cover to install your Clutch Cable.
Note: Two of the screws are shorter. Be sure to note their locations.

1. Remove the six screws that hold the Actuator Cover to the Pulley Cover.
2. Connect your Clutch Cable with O-Ring (not supplied in this kit), Clutch Cable Mount and Ramp Assembly (supplied in this kit) according to your H.D. Service Manual.
3. Install the connected assembly into the Actuator Cover, JIMS No. 8442 according to your H.D. Service Manual.
4. Place Actuator Cover Gasket JIMS No. 8443 and Actuator Cover onto the end of the Pulley Cover.

Note: Gasket may be installed dry.

5. Install the two short (7/8") screws JIMS No. 1074 and the four (1-1/8") screws JIMS No. 1116 that hold the Actuator Cover. Apply a small amount of Trans Lube ** or Blue Loctite to each screw. Thread the six screws into their correct locations as shown in ***Figure 8***. Torque screws to 84-108 in-lbs in a criss-cross pattern.
6. Adjust Clutch according to your H.D. Service Manual.
7. Fill Trans with Gear Oil JIMS No.1231 or equivalent to the same level as an H.D. 5 speed. Change Oil after the first 500 Miles. Refer to your H.D. Service Manual.

FIGURE 8



INSTRUCTIONS FOR INSTALLING ELECTRONIC SPEED SENSOR:

Note: If you will be running an Electronic Speed Sensor you will need to place a Speed Sensor Spacer JIMS No. 8440 (supplied in this kit) over the O-Ring end of your Speed Sensor. If you are not using an electronic speedo sensor, use block-off plate JIMS No. 8042K on the case.

1. Place the Speed Sensor with the spacer into the trans case with the O-Ring ** side down so that the mounting screw hole lines up with the threaded hole in the case. Refer to ***Figure 9***.

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2. Install Mounting Screw JIMS No. 1259 (supplied in this kit). Apply a small amount of Trans Lube ** or Blue Loctite to the screw and thread the screw into the hole in the case. Torque to 7-9 ft-lbs. Refer to ***Figure 9***.

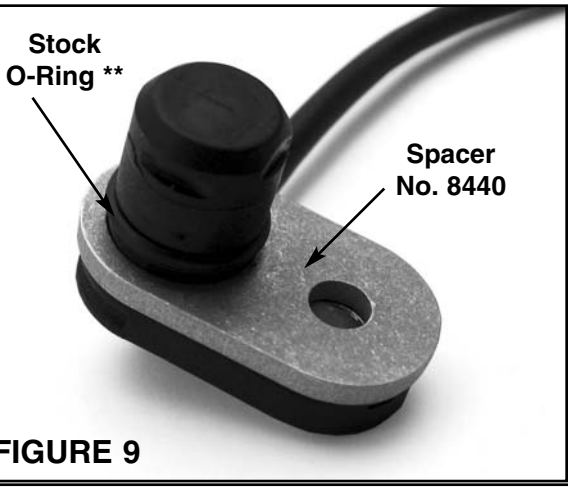

FIGURE 9

DISASSEMBLY

In the unlikely event that you would need to disassemble your complete Transmission we have provided some Instructions that will help you.

This kit is basically easy to Disassemble, but does require some special tools.
For replacement parts, see materials list.

NOTE: Read all instructions before performing work. The transmission disassembly is the same as assembly, but in reverse order. Always disconnect the Battery Ground Cable (at the battery) to prevent injury. Your work area should be well lit. Wear Safety glasses (over your eyes) and protective clothing when working around power tools and compressed air. Protect your skin from solvents and use only in a well-ventilated area. Degreasers are flammable and are a fire hazard. Use common sense and exercise good judgment. Securely mount the trans Case (if not installed in Motorcycle) with JIMS Tool No. 1145 Complete Modular Engine & Transmission Stand Kit or JIMS Tool No. 1289 Trans Stand.

Special Tools Required to un-install JIMS R.S.D. 6 Speed Super Kit:

JIMS® Part No....Description:

35316-80 .....5-speed Maindrive Gear Tool
34902-84 .....Mainshaft Bearing Race Tool
94660-37A ..Mainshaft Sprocket Locknut Wrench
38515-90 .....Clutch Spring Compressor 1990-97
2260 .....Big Twin Sprocket Locker
1131.....Small Lock Ring Pliers
1133.....Large Lock Ring Pliers
2362 .....External Lock Ring Pliers
2234 .....Primary drive Locking Tool
1720 .....5-speed Main Bearing Remover
2189 .....Main and Counter Shaft Installer
1102.....Solvent 184
1080 .....Brass Hammer
1289 .....Trans Stand
1145.....Modular Engine & Trans. Stand Kit
998 .....Door Puller Tool

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INSTRUCTIONS FOR DISASSEMBLY OF YOUR JIMS R.S.D. 6 SPEED OVERDRIVE

1. Remove Primary Covers and Clutch components as shown in your H.D. Service Manual.
2. Drain the oil from Transmission by removing Drain Plug from the trap door, JIMS No. 739A (or if your Trans Case has other means of Oil Drain you may use that)
3. Remove Pulley Cover in the reverse order of assembly for installing Pulley Covers. (Refer to instructions for Installing Pulley Covers.
4. Remove Top cover and Shift Drum. Slide the three Shift Forks into any gear (to lock the Trans, to keep the gears from turning for removal of the Mainshaft Nuts and Countershaft Bearing Lock Screw.
5. Remove Countershaft Bearing Seal Cover, JIMS No. 8421 and Discard.
6. Remove Countershaft Bearing Lock Screw, JIMS No. 1727.

NOTE: You may need to apply heat to remove the 1727 countershaft lock screw.

NOTE: For re-assembly of countershaft Bearing Lock Screw, re-torque to 12 ft-lbs with a 1/2 a drop of Blue Loctite applied to threads of the screw.

7. Remove Shifter Shaft Set Screw, JIMS No. 3784.
8. Remove Shifter Shaft JIMS No. 8446.
9. Remove the three Shift Forks JIMS No's 8413, 8414 and 8415.
10. Remove all trap door hardware holding the trap door to the Transmission Case.
11. Remove trap door from Trans Case using the trap door Puller Tool JIMS No. 998. Refer to the instruction sheet that comes with the tool.
12. Remove the Oiling Trough JIMS No. 8417 by removing the two mounting screws JIMS No. 8426.

NOTE: For assembly of the Oiling Trough screws, torque to 60 in-lbs with one drop of Red Loctite.

13. Re-install trap door without the gear set onto the case in order to remove the Main Drive Gear from the trap door using the Main Drive Gear Bearing remover JIMS No. 35316-80.

NOTE: The Main Drive Gear Main Bearing JIMS No. 8978 and Lock Ring No. 11057 will need to be replaced after the Main Drive Gear has been removed from the bearing.

14. Remove both trap door bearings as you would for any 5-speed rebuild.

NOTE: Take note of the Lock Ring locations before removing them from the trap door.

15. Replace Countershaft and Main Drive Gear Bearings and Lock Rings. Be sure to install them in the same positions as the ones that were removed.
16. Remove all Gears from the Main and Countershafts the same as you would for any 5-Speed Transmission following the Parts List as laid out in this Instruction Sheet.
17. Remove any other Parts, Bearings or Seals from the Transmission Case as you would for any 5-Speed.

INSTRUCTIONS FOR REPAIRING PULLEY COVER BEARINGS AND SEALS (HYDRAULIC & MECHANICAL CLUTCH)

1. To replace outboard Bearing Support (JIMS No. 8419)(Hydraulic & Mechanical):
   a. Remove all 3 Screws, JIMS No. 1112, holding the Seal Retaining Plate, JIMS No. 8428 and remove the Seal Retaining Plate
   b. Remove Seal, JIMS No. 12035B.

NOTE: There are two No. 12035B seals. The "outer" seal can only be removed from the clutch activator side. For the Hydraulic Clutch version, you must first remove the slave cylinder piston. For mechanical, you must first remove the clutch actuator cover.

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c. Remove Outboard Bearing JIMS No. 8419 from the same side as the Seal Retaining Plate.

d. Install new Outboard Bearing with the sealing side facing the Trans Case.

e. Reinstall new Seal with JIMS Tool No.2256.

Note: Do not press new seal in too far.

f. Place the seal retainer plate over the seal aligning the 3 holes.

g. Apply one drop of Blue Loctite onto the threads of each Seal Retainer Plate Screw, JIMS No. 1112. Thread the screws into the holes in the pulley cover and torque to 60 in-lbs.

2. To repair the Mechanical Clutch Pulley Cover:

a. Follow assembly found above under assembly of Mechanical Clutch Pulley Cover in reverse order.

3. To repair the Hydraulic Clutch Pulley Cover:

a. Remove the six screws, JIMS No. 8430, holding the Hydraulic End Cover onto the Pulley Cover.

b. Remove the three Screws, JIMS No.1112, holding the Seal Retaining Plate, JIMS No. 8428 and remove the Seal Retaining Plate & Seal.

c. From the inside of Pulley Cover push on the end of the Piston, JIMS No. 8429, until it is pushed free from the Pulley Cover.

d. Replace any Seals or O-rings that you deem none serviceable. See Parts list in this Instruction sheet.

Note: Replace Seal and O-rings one at a time so that any sealing directions can be maintained.

Apply DOT 5 Brake Fluid to all working surfaces.

e. Reinstall new Seal with JIMS Tool No. 2256.

Note: Do not press new seal in too far or damage to cover may occur.

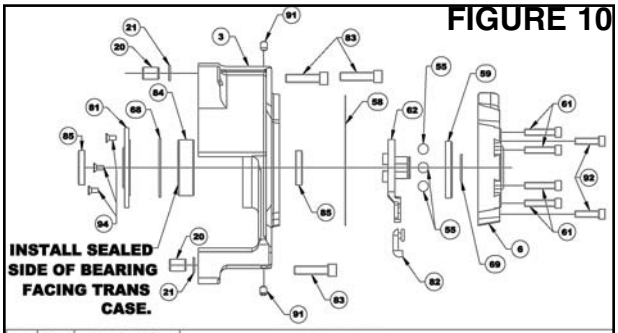
f. Place the Seal Retainer Plate over the seal aligning the 3 holes.

g. Apply one drop of Blue Loctite onto the threads of each Seal Retainer Plate Screw, JIMS No. 1112. Thread the screws into the holes in the pulley cover and torque to 60 in-lbs.

h. Apply one drop of Blue Loctite onto the threads of each Hydraulic End Cover screw, JIMS No. 8430. Thread the screws into the holes in the pulley cover and torque in a criss-cross pattern.

MECHANICAL PULLEY COVER

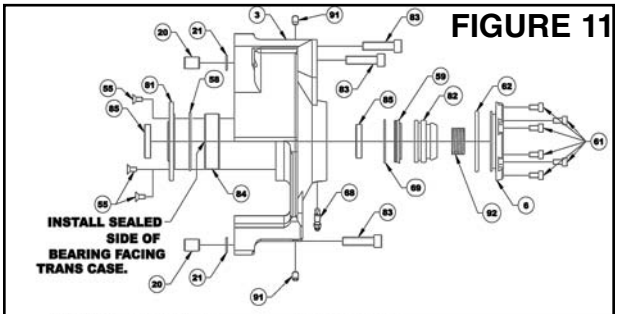
FIGURE 10



NO.	QTY	JIMS P/N	DESCRIPTION
3	1	8441-1	PULLEY COVER,MECHANICAL, CHROMED, RSD
6	1	8442-1	END COVER, MECHANICAL, CHROMED, RSD
20	2	16595-99A	DOWEL, END COVER TO TRAPDOOR
21	2	11273	O-RING, END COVER DOWEL TO TRAPDOOR
55	1	8873	BALL 3/8" RAMP
58	1	8443	GASKET, MECH END COVER, RSD
59	1	25453-87A	RAMP, OUTER
61	4	1116	SCREW, 1/4-20 x 1-1/8" SHCS, CHROME, END COVER
62	1	25409-94B	RAMP, INNER
68	1	8444	O-RING, SEAL RETAINER, RSD
69	1	11250	RETAINER, RAMP
81	1	8428	SEAL RETAINER, RSD
82	1	34920-86	COUPLER, CLUTCH CABLE
83	4	1118	SCREW, 5/16-18 x 1-1/4" SHCS, CHROME
84	1	8419	BEARING, PULLEY COVER, RSD
85	2	12035B	SEAL, PULLEY COVER
91	2	8433	SET SCREW, 1/16 NPT, x 5/16", STAINLESS STEEL
92	2	1074	SCREW, 1/4-20 x 7/8, SHCS, CHROME, END CVR
94	3	1112	SCREW, 8-32 x 3/8" FHSS, SEAL RETAINER

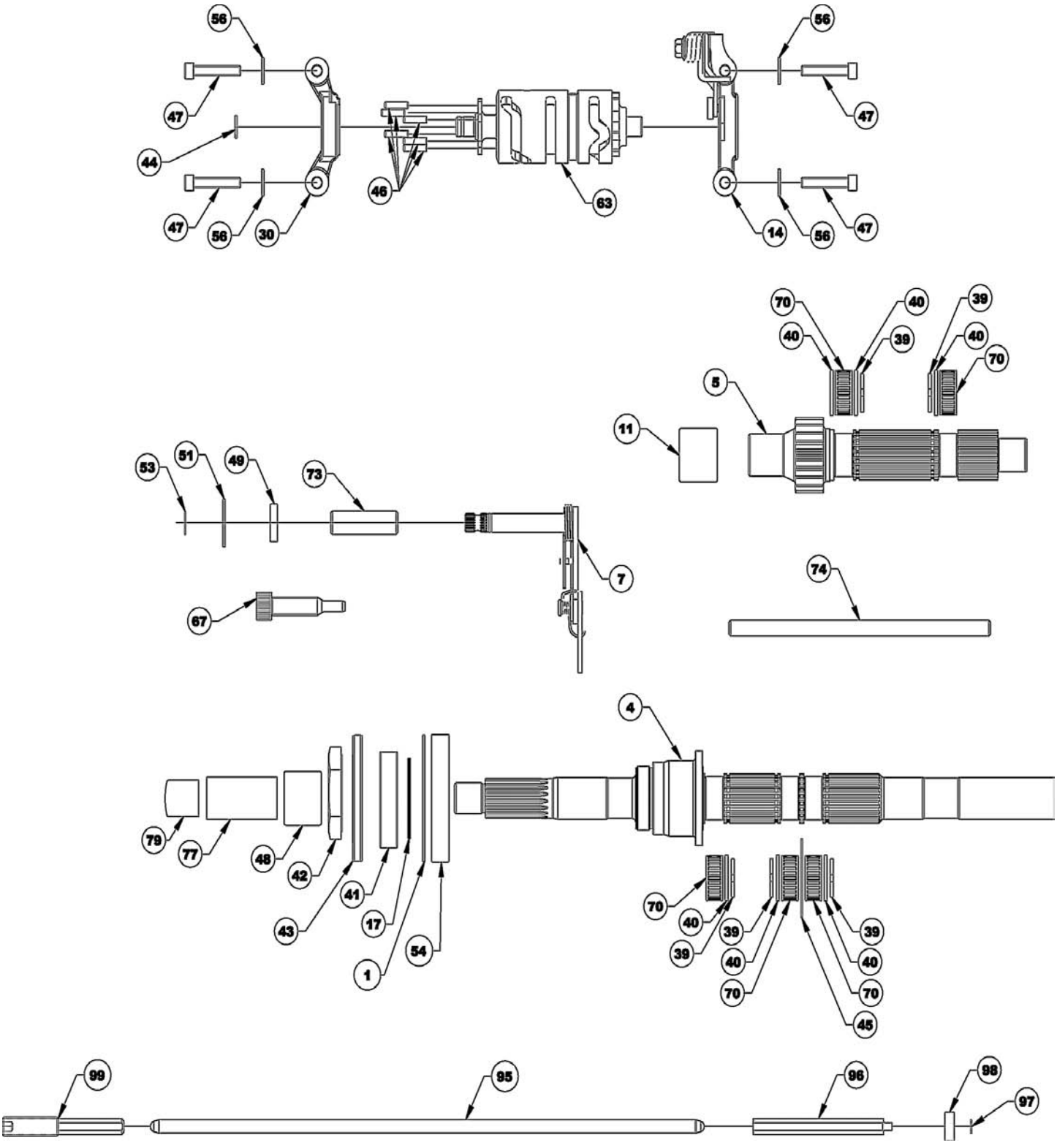
HYDRAULIC PULLEY COVER

FIGURE 11



NO.	QTY	JIMS P/N	DESCRIPTION
3	1	8422-1	PULLEY COVER, HYDRAULIC, CHROMED, RSD
6	1	8423-1	END COVER, HYDRAULIC, CHROMED, RSD
20	2	16595-99A	DOWEL, END COVER TO TRAPDOOR
21	2	11273	O-RING, END COVER DOWEL TO TRAPDOOR
55	3	1112	SCREW, 8-32 x 3/8" FHSS, SEAL RETAINER
58	1	8444	O-RING, SEAL, RETAINER, RSD
59	1	8436	U-SEAL, HYDRAULIC PISTON
61	6	8430	SCREW, 10-24 x 3/8" SHCS, CHROME, END COVER
62	1	8434	O-RING, END COVER
68	1	8431	BLEEDER, SCREW 1/4-28 x 1, CHROME
69	1	8435	O-RING, HYDRAULIC PISTON
81	1	8428	SEAL RETAINER, RSD
82	1	8429	PISTON, HYDRAULIC
83	4	1118	SCREW, 5/16-18 x 1-1/4" SHCS, CHROME
84	1	8419	BEARING, PULLEY COVER, RSD
85	2	12035B	SEAL, PULLEY COVER
91	2	8433	SET SCREW, 1/16 NPT, x 5/16", STAINLESS STEEL
92	1	8432	SPRING, HYDRAULIC PISTON

PARTS DIAGRAM FOR: PILLOW BLOCK ASSEMBLY, COUNTERSHAFT ASSEMBLY, SHIFTER ASSEMBLY, MAINSHAFT ASSEMBLY WITH CLUTCH PUSHROD.



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PARTS LIST FOR: TOP LID, GEARS, SHIFT FORKS AND TRAP DOOR ASSEMBLY

NO.	QTY	JIMS P/N	DESCRIPTION
1	1	11161	RETAINER CASE
2	1	8416-1	TRAPDOOR, CHROME, RSD
3	1	7999M3	CASE, FXST, EVO, POLISHED
4	1	8412-1	MAINSHAFT ASSEMBLY, RSD
5	1	8409-1	COUNTERSHAFT, WITH 6TH GEAR, RSD
6	1	8999C	LID, TOP, CHROME
7	1	8324	ASSEMBLY, LEVER, SHIFTER
9	1	8352	GASKET, TRAPDOOR
11	1	8977	BEARING, COUNTER SHAFT
12	1	1708-1	MEGA NUT
13	2	1207	SCREW, 1/4-20 x 3/4" SHCS, PLAIN
14	1	33304-00	RIGHT PILLOW BLOCK WITH BEARING & RETAINER
16	1	8424	SPACER, RIGHT, PULLEY
17	2	11165	QUAD SEAL
18	1	12044A	SEAL, MAINSHAFT, TRAPDOOR, RSD
19	1	11057	RETAINER, CASE BEARING, SMALL
24	2	8426	SHOULDER BOLT, 10-24, ÿ.25 x 3/4"
25	1	8421	SEAL, END CAP, 50MM x 8MM
26	1	8427	RETAINER, COUNTERSHAFT BEARING, RSD
27	1	1727	SCREW, 5/16-18 x 1" FHSS
29	1	11020	RETAINER, DOOR BEARING, SMALL
30	1	33301-00A	LEFT PILLOW BLOCK WITH BEARING & RETAINER
31	1	8404-1	GEAR, 2ND COUNTERSHAFT, RSD
32	1	8405-1	GEAR, 3RD & 4TH, COUNTERSHAFT, RSD
33	1	8402-1	GEAR, 1ST, COUNTERSHAFT, RSD
34	1	8403-1	GEAR, 2ND, MAINSHAFT, RSD
35	1	8407-1	GEAR, 3RD, MAINSHAFT, RSD
36	1	8406-1	GEAR, 4TH, MAINSHAFT, RSD
37	1	8408-1	GEAR, 6TH, MAINSHAFT, RSD
38	1	8401-1	GEAR, 1ST, MAINSHAFT, RSD
39	5	11067	RETAINER, MAINSHAFT/COUNTERSHAFT
40	6	6003	THRUST WASHER, MAINSHAFT/COUNTERSHAFT
41	1	8437	SPACER, PRIMARY SIDE
42	1	35211-91B	NUT, LEFT MAINSHAFT, RSD
43	1	12067	SEAL, MAIN CASE
44	1	11342	RETAINING RING, SHIFT DRUM

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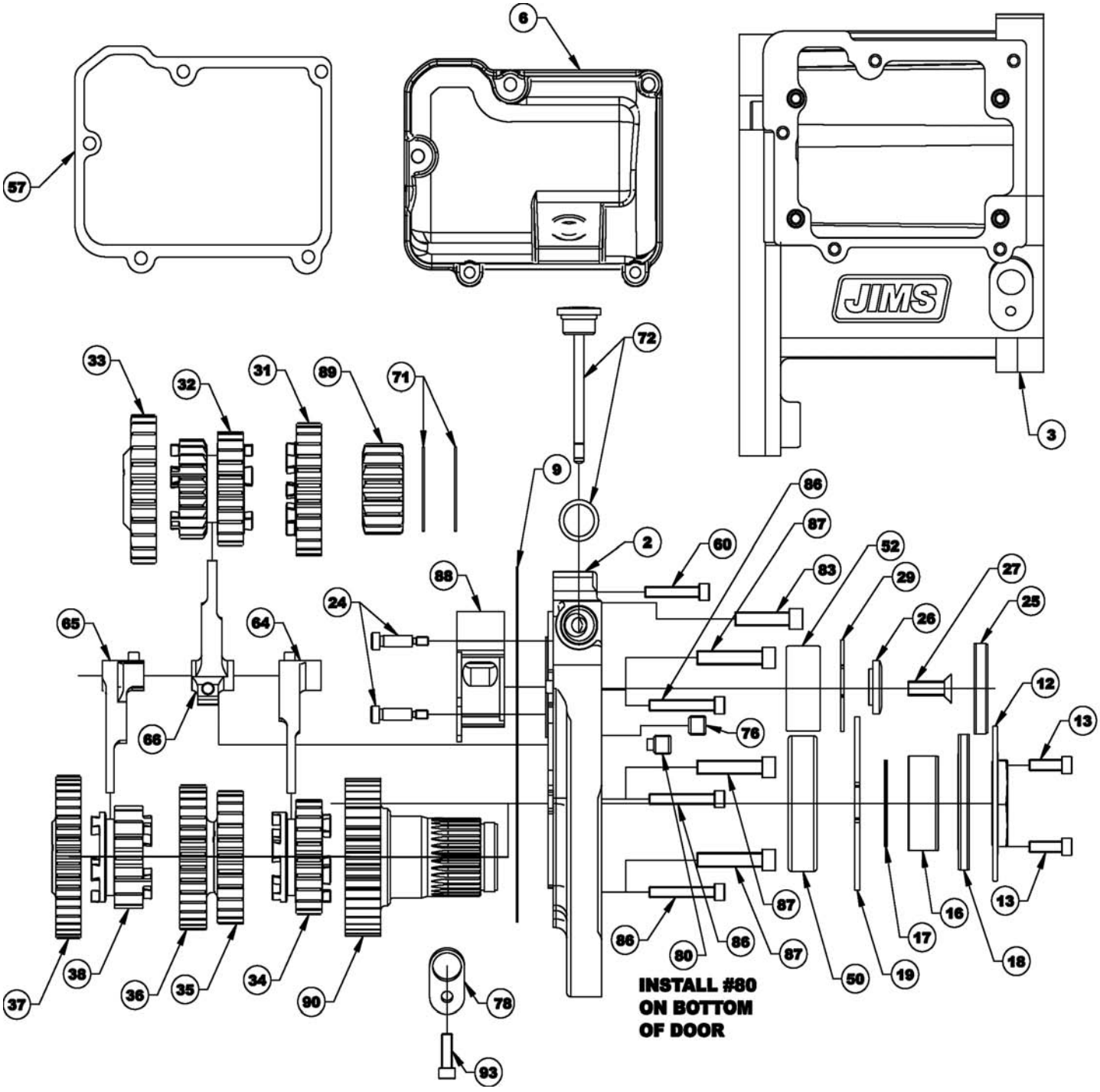
PARTS DIAGRAM FOR: TOP LID, GEARS, SHIFT FORKS AND TRAP DOOR ASSEMBLY



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PARTS LIST FOR: PILLOW BLOCK ASSEMBLY, COUNTERSHAFT ASSEMBLY, SHIFTER ASSEMBLY, MAINSHAFT ASSEMBLY WITH CLUTCH PUSHROD.

NO.	QTY	JIMS P/N	DESCRIPTION
45	1	8420	THRUST WASHER, 30MM x 47MM x .034
46	6	8356	PIN, SHIFT DRUM
47	4	2135	SCREW, PILLOW BLOCK, ALLEN
48	1	34091-85	RACE, MAINSHAFT
49	1	12045	SEAL, SHIFTER
50	1	8978A	BEARING, TRAPDOOR, SMALL
51	1	6497HW	WASHER, SHIFTER SEAL
52	1	8418	BEARING, TRAPDOOR, COUNTERSHAFT, RSD
53	1	11150	RETAINER, SHIFTER SHAFT
54	1	8996	BEARING, MAIN CASE
56	4	1215	WASHER, PLAIN, SPECIAL, PILLOW BLOCK
57	1	34904-86	GASKET, LID, (FXST & FLHT)
60	1	1258	SCREW, 1/4-20 x 1-1/4" SHCS, TRAP DOOR
63	1	8425	SHIFT DRUM, RSD
64	1	8413	SHIFT FORK, 3RD/5TH, RSD
65	1	8414	SHIFT FORK, 4TH/6TH, RSD
66	1	8415	SHIFT FORK, 1ST/2ND, RSD
67	1	34978-00A	SCREW, CENTERING PIN
70	5	8876A	BEARING, SPLIT CAGE
71	2	8081	SHAFT, SPACER
72	1	37075-87	DIPSTICK, W/O-RING, CHROME
73	1	7514	SLEEVE, SHIFTER SHAFT (34979-00)
74	1	8446	SHAFT, SHIFT FORK
76	1	3784	SET SCREW, SHIFT FORK SHAFT
77	1	8012-1	SHRINK WRAP, 1" x 2-1/2"
78	1	8440	SPACER, SENSOR
79	1	2401	CAP, BLK PLASTIC
80	1	739A	PLUG, TRAPDOOR
86	3	1261	SCREW, 1/4-20 x 1-1/2, SHCS, CHROME, DOOR
87	3	8092	SCREW, 5/16-18 x 1-1/2" SHCS, CHROME, DOOR
88	1	8417	TROUGH, OIL PICK-UP, RSD
89	1	35626-94	GEAR, 5TH, COUNTERSHAFT
90	1	8295	GEAR, 5TH, MAINSHAFT
93	1	1259	SCREW,1/4-20x3/4,SHCS,CHROME,SENSOR PLATE
95	1	37088-90	PUSHROD, CENTER
96	1	8452	RIGHT PUSHROD
97	1	8453	RETAINER, PUSHROD
98	1	8451	BEARING, PUSHROD
99	1	8326	SCREW, ADJUSTER, CLUTCH HUB
101	1	1708-IS	INSTRUCTION SHEET, MEGA NUT (NOT SHOWN)

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